



The Solutions Network

Rochester, New York

Energy Efficiency and Load Management

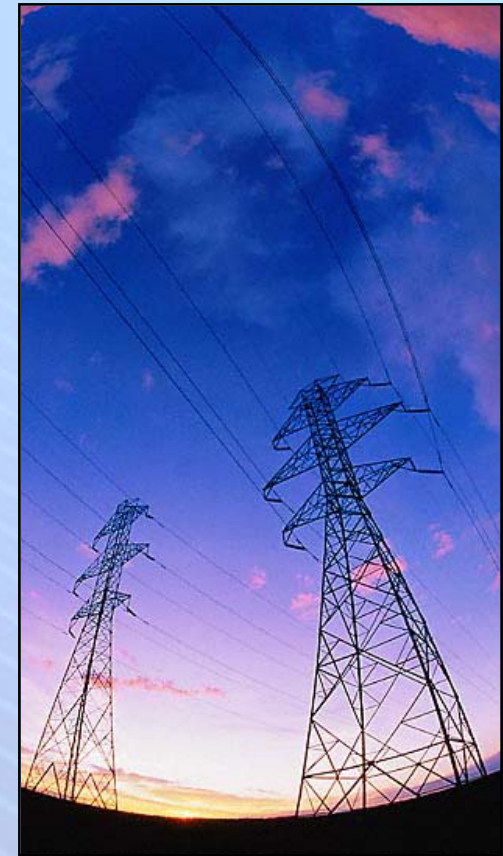
Brian Henderson
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NYSERDA





2004 SBC Energy Efficiency

- ❖ **Transform Markets for EE Products**
 - Overcome barriers/lasting change
 - Capture lost opportunities
 - Coordinate with regional/national efforts
 - "Upstream" initiatives
- ❖ **Foster Energy Services Industry**
 - Customers not typically served
 - Aversions to risk and lack of \$
 - Establish a vigorous industry
- ❖ **Inform Small Customers of Options**
 - Helping obtain services
 - Broader energy awareness
- ❖ **Target Peak Demand and Capacity**
 - Constraint Situations
 - Summer peak reductions



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Commercial and Industrial Energy Efficiency and Load Management

- ❖ New Construction/Green Buildings
- ❖ Commercial/Industrial Performance Program
- ❖ MT and Innovative Opps
- ❖ FlexTech/Technical Assistance
- ❖ Loan Fund
- ❖ Peak Load Management Program



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New Construction Program

Objective:

- ❖ Transform the way buildings are designed and built

Services:

- ❖ Both new construction and substantial renovations
- ❖ Financial incentives to offset added costs associated with more energy-efficient equipment and systems
- ❖ Technical assistance
- ❖ Commissioning



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New Construction Program (as of 6/30/04)

Current Activity

- ❖ Over 1070 Applications/ Projects for 112 million sq. ft.
- ❖ Estimated incentives at \$66 million
- ❖ 600 A/E Firms
- ❖ Influencing \$3 Billion in new construction activity per year
- ❖ Average savings 13-18% over current energy code



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Technical Assistance

Objective: Establish network of competent TA providers

- ❖ Feasibility Studies
- ❖ Energy Operations Management
- ❖ Rate Analysis & Aggregation
- ❖ CHP & Renewable Generation
- ❖ FlexTech
- ❖ Audits



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2004 Technical Assistance

- ❖ Over 3000 Businesses and Institutions served
 - Over 200 TA providers
- ❖ Stretches valuable public funds
 - 1 kwh saved = \$0.003 public funds spent
- ❖ Leverages economic development
 - Leveraging \$18 for each \$1 SBC invested
- ❖ Fort Drum
- ❖ Stratton Air National Guard Base

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Commercial/Industrial Performance Program

**Objective: Build a Robust
ESCO Industry**

- ❖ Provides incentives to contractors that deliver verifiable electric energy savings
- ❖ Standard Performance Contract is between NYSERDA and contractor
- ❖ Contractor - Energy Service Company or ESCO



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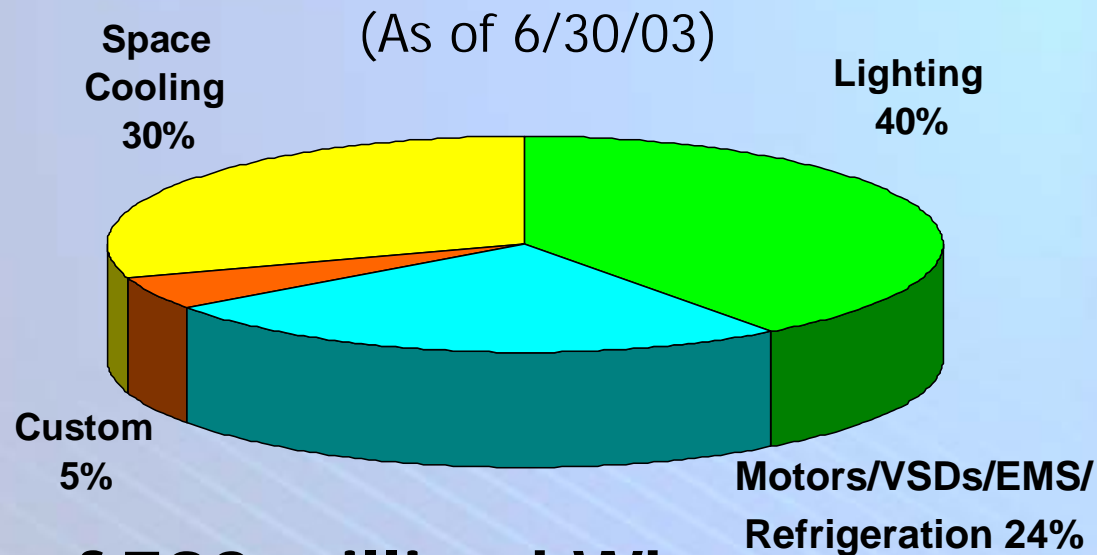
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Current Status of C/I Performance Program



- ❖ 850 Projects
- ❖ Annual savings of 792 million kWh
- ❖ Total cost of projects exceeds \$550 million
- ❖ 161 different ESCOs participating
- ❖ Installation complete on 400 projects delivering 84 MW of peak demand reduction

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United States Post Office

- ❖ 13 projects
- ❖ 2,800 kW savings per year
- ❖ 18 million kWh savings per year
- ❖ NYSERDA incentive of \$2 million dollars
- ❖ Post Case: Pulse start electronic dimming luminaire with dual reflector.



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Executive Order No. 111 Governor George E. Pataki *"Green and Clean"*

State Buildings and Vehicles

- ❖ Leadership Role in the Nation
- ❖ Comprehensive Requirements
- ❖ Far Reaching and Inclusive
- ❖ Building an E³ Secure Future
- ❖ Challenges Local Governments and Schools to Voluntarily Adopt Standards

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Who and How Much Does this Affect?

- ❖ Over 200 Agencies, Departments, Authorities, Commissions and other State Offices where the Governor has Executive Authority
- ❖ Impacts Approximately 20,000 Buildings with Over 400 Million Sq. Ft. of State Owned and Operated Space
- ❖ Affects Fleet of 10,000 State Operated Vehicles
- ❖ Reduces \$530 million annual energy bill

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Main Goals of Executive Order No. 111

- ❖ 35% Energy Reduction by 2010
- ❖ 10% Renewable Power by 2005, 20% by 2010
- ❖ New Buildings and Substantial Renovations Must Be Green Buildings
- ❖ Peak Load Reduction
- ❖ 50% of New Vehicle Purchases by 2005 Must be AFV, 100% of New Purchases by 2010
- ❖ Procure Energy-Efficient Products



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Existing Buildings

- ❖ **Advanced Monitoring**
- ❖ **Commissioning and O&M Improvements**
- ❖ **Emphasis on Life-Cycle Costing**
- ❖ **State EnVest ESCO Projects**
 - **Model document**
 - **Pre-qualified ESCO list**
 - **NYSERDA retain TA contractors**
 - **Tax exempt lease financing (\$125 m)**



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Progress To Date

- ❖ **8.9% Energy Reduction Reported (25% of goal)**
- ❖ **100 MW of Peak-Load Reduction Capability**
- ❖ **720 AFVs Purchased During Reporting Period**
- ❖ **Many Green Buildings Underway**
- ❖ **Energy Reductions Estimated to Reduce Expenditures by \$52 Million**
- ❖ **Many Renewable Energy Projects Underway**
- ❖ **Significant Emission Reduction and Economic Development**

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New York Statewide Coordinated DR Efforts

- ❖ **Coordinated Demand Response Working Group**
 - PSC, NYPA, LIPA, DEC, and NYSERDA (Lead)
 - Various Energy Efficiency and Load Management Programs
- ❖ **Program Objectives**
 - Control and reduce loads on specific NY electric utility systems
 - Enable customers to participate in NYISO or TO's emergency programs
 - Educate public on energy efficiency and to shift consumption to off-peak periods



Region	2001 MW Achieved	2002 MW Achieved	2003 MW Achieved
Upstate	188	504	520
New York City	134	237	268
Long Island	247	276	427
Total	569	1,017	1,215

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Fort Hamilton Army Base

- ❖ Located in the Bay Ridge section of Brooklyn, NY
- ❖ Participated in NYSERDA's Peak Load Reduction Program
- ❖ Lighting upgrades
- ❖ Demand savings of 400kW
- ❖ Over 2,000,000kWH in annual savings
- ❖ \$158,000 total NYSERDA incentive



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Questions?

Contact Information:

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www.GetEnergySmart.org

www.NYSERDA.org

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